

**Notice of Allowability****Application No.**

10/786,986

**Examiner**

Hung X. Dang

**Applicant(s)**

ZHOU ET AL.

**Art Unit**

2873

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to \_\_\_\_.
2.  The allowed claim(s) is/are 1-36.
3.  The drawings filed on \_\_\_\_ are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*  - c)  None of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of  
Paper No./Mail Date \_\_\_\_.
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_.

**Claims Allowed**

1. Claims 1-36 are allowed.

**Reasons For Allowance**

2. The following is an Examiner's Statement of Reasons for Allowance:

The prior art fails to teach a combination of all the claimed features as present in independent claim 1, which include an electric field reversibly switches the molecular switch from the first state to the second state, said molecular switch comprising a hydrophobic moiety and a hydrophilic moiety.

The prior art fails to teach a combination of all the claimed features as present in independent claim 19, which include an electric field reversibly switches the molecular switch from the first state to the second state, and wherein said molecular switch has a hydrophobic moiety and a hydrophilic moiety such that substantially all of the molecular switches have the hydrophilic moiety oriented in the same direction.

The prior art fails to teach a combination of all the claimed features as present in independent claim 28, which include an electric field reversibly switches the molecular switch from the first state to the second state, and wherein said molecular switch has a hydrophobic moiety and a hydrophilic moiety such that substantially all of the molecular switches have the hydrophilic moiety oriented in the same direction toward the first electrode layer, and inducing an electric potential between the first and second electrode layers sufficient to switch the molecular switches from the first or second state to the second or first state, respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication should be directed to Examiner Dang at telephone number (571) 272-2326.

8/05



Hung X. Dang

Primary Examiner

Art Unit 2873